

1 **CLAIMS**

2 1. A reading system comprising:

3 a user interface configured to allow a user to select text in a non-native
4 language and view a translation of the selected text in a native language; and

5 a cross-language reading wizard comprising:

6 a parser for parsing selected text into individual translation units,

7 a word translation selector for choosing candidate word translations
8 for the translation units, and

9 a translation generator for translating the candidate word translations
10 into corresponding words or phrases in the native language that can be
11 presented to the user via the user interface.

12
13 2. The reading system of claim 1, wherein the parser comprises a
14 morphological analyzer to morphologically process individual words to obtain a
15 morphological root of each word.

16
17 3. The reading system of claim 1, wherein the parser comprises a part-
18 of-speech/base noun phrase identification module for tagging individual words
19 with identifiers.

20
21 4. The reading system of claim 3, wherein the part-of-speech/base noun
22 phrase identification module comprises a statistical model.

1 **5.** The reading system of claim 1, wherein the parser comprises a phrase
2 extension module for applying phrase extension rules to individual words.
3

4 **6.** The reading system of claim 1, wherein the translation generator
5 comprises a dictionary module for translating the candidate word translations into
6 the corresponding words or phrases.
7

8 **7.** The reading system of claim 6, wherein the dictionary module
9 comprises a word dictionary.
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11 **8.** The reading system of claim 6, wherein the dictionary module
12 comprises a phrase dictionary.
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14 **9.** The reading system of claim 6, wherein the dictionary module
15 comprises an irregular morphology dictionary.
16

17 **10.** The reading system of claim 1, wherein the translation generator
18 comprises a template module comprising one or more templates that can be used
19 to translate the candidate word translations into the corresponding words or
20 phrases.
21

22 **11.** The reading system of claim 1, wherein the translation generator
23 comprises a rules module that contains multiple rules for translating non-native
24 language words into native language words.
25

1 **12.** The reading system of claim 1, wherein the translation generator
2 comprises one or more statistical models.

3
4 **13.** The reading system of claim 1, embodied as a browser.

5
6 **14.** A reading system comprising:
7 a user interface configured to allow a user to select English language text
8 and view a Chinese language translation of the selected text; and
9 a cross-language reading wizard comprising:

10 a parser for parsing selected text into individual translation units,
11 a word translation selector for choosing candidate word translations
12 for the translation units, and
13 a translation generator for translating the candidate word translations
14 into corresponding phrases in the Chinese language that can be presented to
15 the user via the user interface.

16
17 **15.** The reading system of claim 14, embodied as a browser.

18
19 **16.** A reading system comprising:
20 a user interface configured to allow a user to select text in a non-native
21 language and view a translation of the selected text in a native language, the user
22 interface comprising a pop-up window in which native language text can be
23 viewed by the user; and

24 a cross-language reading wizard configured to:
25 receive non-native text that has been selected by the user, and

1 automatically translate the non-native text into the native language
2 text.

3

4 **17.** The reading system of claim 16, wherein the pop-up window is
5 displayed adjacent text that has been selected by the user.

6

7 **18.** The reading system of claim 16, wherein the pop-up window is
8 scrollable to display multiple translations and is displayed adjacent text that has
9 been selected by the user.

10

11 **19.** The reading system of claim 16, embodied as a browser.

12

13 **20.** A computer-aided reading method comprising:
14 presenting non-native language text to a user via a user interface;
15 receiving text selected by the user;
16 processing the text selected by the user to provide text that has been
17 translated from the non-native-language into a native language; and
18 presenting the translated text to the user via the user interface.

19

20 **21.** The computer-aided reading method of claim 20, wherein said
21 processing comprises:

22 parsing the text into translation units; and
23 obtaining a morphological root for one or more translation units.

1 **22.** The computer-aided reading method of claim 20, wherein said
2 processing comprises:

3 parsing the text into translation units; and
4 characterizing translation units using part-of-speech tagging and base noun
5 phrase identification.

6
7 **23.** The computer-aided reading method of claim 20, wherein said
8 processing comprises:

9 parsing the text into translation units;
10 characterizing translation units using part-of-speech tagging and base noun
11 phrase identification; and
12 applying rules-based phrase extension and pattern matching to the
13 characterized translation units to provide a tree list.

14
15 **24.** The computer-aided reading method of claim 23, wherein said
16 processing further comprises generating, based on the tree list, candidate word
17 translations in the native language.

18
19 **25.** The computer-aided reading method of claim 24, wherein said
20 processing further comprises translating the candidate word translations to
21 corresponding words and/or phrases in the native language.

1 **26.** One or more computer-readable media having computer-readable
2 instructions thereon which, when executed by a processor, direct a computer to
3 perform the method of claim 20.

4

5 **27.** The computer-aided reading method of claim 20, wherein the recited
6 acts are performed by a browser.

7

8 **28.** A reading system comprising:
9 one or more computer readable media; and
10 code embodied on the media configured to implement a browser, the
11 browser being configured to:

12 present English language text to a user via a user interface;
13 receive text selected by the user;
14 process the text selected by the user to provide text that has been
15 translated from English into a Chinese language; and
16 present the translated text to the user via the user interface.

17

18 **29.** The reading system of claim 28, wherein the browser is configured
19 to present multiple translations of the same English language text to the user.

20

21 **30.** The reading system of claim 28, wherein the browser is configured
22 to present the translated text in a translation window adjacent English language
23 text selected by the user.

1 **31.** The reading system of claim 28, wherein the browser is configured
2 to present multiple translations of the same English text in a translation window
3 adjacent English language text selected by the user, the translation window having
4 a drop-down feature to expose at least some of the multiple translations.

5
6 **32.** A computer-aided reading method comprising:
7 presenting English language text to a user via a user interface;
8 receiving text selected by the user;
9 processing the text selected by the user to provide text that has been
10 translated from the English language into a Chinese language; and
11 presenting the translated text to the user via the user interface.

12
13 **33.** The computer-aided reading method of claim 32, wherein said
14 processing comprises:
15 parsing the text into translation units; and
16 obtaining a morphological root for one or more translation units.

17
18 **34.** The computer-aided reading method of claim 32, wherein said
19 processing comprises:
20 parsing the text into translation units; and
21 characterizing translation units using part-of-speech tagging and base noun
22 phrase identification.

1 **35.** The computer-aided reading method of claim 32, wherein said
2 processing comprises:

3 parsing the text into translation units;
4 characterizing translation units using part-of-speech tagging and base noun
5 phrase identification; and
6 applying rules-based phrase extension and pattern matching to the
7 characterized translation units to provide a tree list.

8

9 **36.** The computer-aided reading method of claim 35, wherein said
10 processing further comprises generating, based on the tree list, candidate word
11 translations in the Chinese language.

12

13 **37.** The computer-aided reading method of claim 36, wherein said
14 processing further comprises translating the candidate word translations to
15 corresponding words and/or phrases in the Chinese language.

16

17 **38.** One or more computer-readable media having computer-readable
18 instructions thereon which, when executed by a processor, direct a computer to
19 perform the method of claim 32.

20

21 **39.** A computer-aided reading method comprising:
22 enabling a user to select at least one word presented by a user interface in a
23 non-native language;
24 automatically determining whether a corresponding phrase is associated
25 with the selected one word; and

1 presenting one or more translations of at least the selected word in a native
2 language or, if there is a corresponding phrase associated with the selected word,
3 presenting at least one translation of the corresponding phrase in a native
4 language.

5

6 **40.** The computer-aided reading method of claim 39, wherein said
7 presenting comprises presenting the translation in a translation window adjacent
8 the corresponding selected at least one word.

9

10 **41.** The computer-aided reading method of claim 40, wherein said
11 translation window is scrollable to present multiple different translations.

12

13 **42.** The computer-aided reading method of claim 39, wherein said
14 presenting comprises presenting multiple most likely translations.

15

16 **43.** The computer-aided reading method of claim 42, wherein said
17 presenting further comprises sorting the most likely translations by context.

18

19 **44.** The computer-aided reading method of claim 39 further comprising:
20 receiving user input that indicates that the user desires for only a selected
21 word comprising part of a phrase to be translated, and
22 presenting one or more translations of only the selected word.

1 **45.** One or more computer-readable media having computer-readable
2 instructions thereon which, when executed by a processor, direct a computer to
3 perform the method of claim 39.

4

5 **46.** A reading system comprising:
6 one or more computer readable media; and
7 code embodied on the media configured to implement a browser, the
8 browser being configured to:

9 enable a user to select at least one English language word presented
10 by a user interface;

11 automatically determine whether a corresponding phrase is
12 associated with the selected at least one English language word; and

13 present one or more translations of the selected at least one English
14 language word in a Chinese language or, if there is a corresponding phrase
15 associated with the selected at least one English language word, presenting
16 at least one translation of the corresponding phrase in the Chinese language.

17

18 **47.** A cross-language user interface comprising:
19 a first area configured to display text in a non-native language; and
20 a second area configured to display translated portions of at least some of
21 the text in a native language.

1 **48.** The cross-language user interface of claim 47, wherein the second
2 area is disposed adjacent at least some text that has been selected by a user for
3 translation.

4

5 **49.** The cross-language user interface of claim 47, wherein the non-
6 native language comprises English language, and the native language comprises
7 Chinese language.

8

9 **50.** The cross-language user interface of claim 47, wherein the second
10 area comprises a pop-up window.

11

12 **51.** The cross-language user interface of claim 50, wherein the pop-up
13 window comprises a drop-down feature to display additional translations.

14

15 **52.** The cross-language user interface of claim 47, wherein the second
16 area displays multiple different translations of the same text.

17

18 **53.** A cross-language user interface comprising:
19 a first area within which text can be displayed for selection by a user, the
20 text being displayed in a first language; and
21 a second area adjacent text selected by the user, the second area being
22 configured to display text that has been translated into a second different language,
23 the translated text corresponding to text that has been selected by the user.

1 **54.** The cross-language user interface of claim 53, wherein the first
2 language comprises English and the second language comprises Chinese.

3

4 **55.** The cross-language user interface of claim 53, wherein the second
5 area comprises a pop-up window.

6

7 **56.** The cross-language user interface of claim 53, wherein the second
8 area comprises a pop-up window having a drop down feature to display multiple
9 translations.

10

11 **57.** The cross-language user interface of claim 53, wherein the second
12 area displays multiple different translations of the same text.

13

14 **58.** A reading system comprising:
15 a cross-language reading wizard comprising:
16 a parser for parsing selected text into individual translation units, the
17 parser comprising a part-of-speech/base noun phrase identification module
18 for tagging individual words with identifiers,
19 a word translation selector for choosing candidate word translations
20 for the translation units, and
21 a translation generator for translating the candidate word translations
22 into corresponding words or phrases in the native language that can be
23 presented to the user via the user interface.

1 **59.** The reading system of claim 58, wherein the parser comprises a
2 morphological analyzer to morphologically process individual words to obtain a
3 morphological root of each word.

4

5 **60.** The reading system of claim 58, wherein the parser comprises a
6 phrase extension module for applying phrase extension rules to individual words.

7

8 **61.** One or more computer readable media having computer-readable
9 instructions thereon which, when executed by one or more processors, cause the
10 one or more processors to implement a cross-language reading wizard comprising:

11 a parser for parsing selected text into individual translation units, the
12 parser comprising a part-of-speech/base noun phrase identification module
13 for tagging individual words with identifiers,

14 a word translation selector for choosing candidate word translations
15 for the translation units, and

16 a translation generator for translating the candidate word translations
17 into corresponding words or phrases in the native language that can be
18 presented to the user via the user interface.

19

20 **62.** One or more computer readable media having computer-readable
21 instructions thereon which, when executed by one or more processors, cause the
22 one or more processors to:

23 present non-native language text to a user via a user interface;

24 receive text selected by the user;

25 process the text selected by:

1 parsing the text into translation units,
2 characterizing translation units using part-of-speech tagging and
3 base noun phrase identification,
4 applying rules-based phrase extension and pattern matching to the
5 characterized translation units to provide a tree list,
6 generating, based on the tree list, candidate word translations in the
7 native language, and
8 translating the candidate word translations to corresponding words
9 and/or phrases in the native language to provide text that has been
10 translated from the non-native-language into a native language; and
11 present translated text to the user via the user interface.